AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) A receiver for receiving optically transmitted signals, the receiver comprising an optical/electrical converter, an electronic feedback filter and at least one eye monitor for determining a quality of a transmission link, an output of the at least one eye monitor being connected to an input of the electronic feedback filter, wherein the eye monitor comprises:

first and second threshold-value decision elements for deciding a level of a data signal based on first and second threshold values which are set close to vertices of an eye opening of an eye diagram;

first and second signal comparators for determining pseudo-errors by comparing decided signals output by the threshold-value decision elements with a correct signal;

first and second integrators for integrating the pseudo-errors output by the first and second signal comparators to generate first and second internal control variables; and

first and second regulators which correct the first and second threshold values based on comparisons between the first and second internal control variables and first and second setpoint values, respectively.

2. (Previously Presented) The receiver according to Claim 1, wherein the receiver comprises two eye monitors, outputs of which are connected to the inputs of the electronic feedback filter, the two eye monitors measuring the eye opening of the signal and outputting it as a parameter signal.

3. (Currently Amended) A high-speed eye monitor comprising:

first and second threshold-value decision elements for deciding a level of a data signal based on first and second threshold values which are set close to vertices of an eye opening of an eye diagram;

first and second signal comparators for determining pseudo-errors by comparing decided signals output by the threshold-value decision elements with a correct signal;

first and second integrators for integrating the pseudo-errors output by the first and second signal comparators to generate first and second internal control variables; and

first and second regulators which correct the first and second threshold values based on comparisons between the first and second internal control variables and first and second setpoint values, respectively,

wherein the first and second threshold-value decision elements receive the first and second threshold values from the first and second regulators.

4. (Previously Presented) The high-speed eye monitor according to Claim 3, wherein the setpoint values are superimposed by small-signal components.

5. (Previously Presented) The high-speed eye monitor according to Claim 3, wherein results of measurement of the eye opening and a small-signal response are used in the internal control variables for determination of the Q-factor.

6. (Previously Presented) A method for measuring the eye opening of an eye diagram, the method comprising:

generating, at first and second threshold-value decision elements, first and second data signals with pseudo-errors by determining a level of a data signal based on first and second threshold values which correspond approximately to vertices of the eye opening to generate first and second data signals with pseudo-errors;

detecting first and second pseudo-errors by comparing the first and second data signals with a correct signal;

integrating the first and second pseudo-errors;

comparingthe integrated first and second pseudo-errors with first and second setpoint values, respectively; and

correcting, at first and second regulators, the first and second threshold values based on the comparisons between the integrated first and second pseudo-errors and the first and second setpoint values, wherein the first and second threshold-value decision elements receive the first and second threshold values from the first and second regulators; and

generating a differential signal of the corrected first and second threshold values as a measurement value of the eye opening.

7. (Previously Presented) A method for determining a garbled signal, the method comprising:

determining the signal with a feedback filter which makes decisions on the basis of set threshold values;

determining an eye opening of the signal with first and second eye monitors which determine eye edges at vertices of the signal and supply a result to the feedback filter as a parameter; and

setting the threshold values of threshold value decision elements in the feedback filter, the parameter being used for setting of the threshold values so that the signal is determined in the eye optimum,

wherein the determining the eye opening comprises:

determining the signal based on first and second threshold values which correspond approximately to vertices of the eye opening to generate first and second data signals with pseudo-errors;

detecting first and second pseudo-errors by comparing the first and second data signals with an already determined signal;

integrating the first and second pseudo-errors;

comparing the integrated first and second pseudo-errors with first and second setpoint values, respectively; and

correcting the first and second threshold values based on comparisons between the integrated first and second pseudo-errors and the first and second setpoint values; and

generating a differential signal of the corrected first and second threshold values as the parameter.